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## HOME PORTRAITURE.

IT seems to be generally admitted that the amateur begins by undertaking the most difficult branches of work first, and after meeting with divers discouragements either abandons the whole affair or else gradually discovers the error of his ways and gets hold of the right end and moves on to success and satisfaction. The beginner's idea of a photograph is a picture of somebody, and of a camera as an apparatus for taking people's pictures with, and in many cases that is all he wants it for; and when he is carefully advised to start with slow plates, and essay only well-lighted views, he naturally resents such ill-timed suggestions and generally goes home immediately and proceeds to "take the baby."

This proceeding, however, is rarely a success, and usually it is only after many tribulations that really satisfactory home portraits are produced; but there really seems to be no good reason why some of the trials and failures might not be avoided, or why one may not profit by the hard-bought experiences of others in this most desirable and pleasant branch of amateur work.

To make fairly good portrait work, however, requires suitable tools; but these need not necessarily be the most expensive. The lens should be of fairly long focus —about twelve inches,—and the rapid rectilinear type will generally be found most available. If the cost of this be found too high, good work may be done with a single achromatic landscape lens of about fifteen inches focal length, in which the fixed stop has been reamed out to a size of not less than one inch to one and a quarter inches. This enlargement of aperture will of course materially reduce the marginal definition of the field; but when that is wanted, smaller diaphragms may be inserted, and for portraits, where only the very centre of the field is to be employed, the increased opening will give the desired speed, while with this length of focus and limited field the spherical distortion is so small that it may be neglected. For portraits, great depth of focus is not needed, and indeed in many cases is undesirable, and if good definition is obtained upon the features, so that the true expression is secured, the sharpness may well be permitted to diminish for the remainder. Of course the possession of a fine portrait combination is much to be desired, and where the expense of this is prohibitory the intermediate types, such as the Steinheil Antiplanet or the New Voigtlaender Euryscope, are nearly as good.

As far as the camera goes, anything which is steady and light-tight will answer, and it is unnecessary to spend money in that direction. For cabinet portraits, 5 x 7 holders are about right, giving a moderate margin for centering and trimming.

The amateur is generally limited in his supply of screens and backgrounds, but sometimes the extemporized affairs are more pleasing than the orthodox professional pilasters, balustrades, or gates, and if care and taste are displayed in handling the subject the less conspicuous the background the more satisfactory the result is likely to be.

A framework somewhat resembling a large clothes-horse can readily and cheaply be made at a neighboring carpenter shop, and should be about eight feet high by ten feet wide, and for convenience of storage it may be pinned together so as to be readily knocked down and stood away when not in use. Upon this frame various things may be draped, and often very effective results obtained. There should be one curtain of gray flannel, giving, when photographed, a neutral tint just right for vignetting, and soft enough to hang in easy folds without looking harsh or stiff. This may be hung from the top by hooks and rings, or may be smoothly drawn when the picture is to be vignetted and the folds are not desired. Many styles of shawls produce effective backgrounds, especially when far enough back of the sitter to be somewhat out of focus; while in most cases the easy chair which does duty for a posing chair is much less obstrusive and more effective if entirely concealed under drapery whose apparently careless folds are not altogether accidental.

When the floor at the feet of the sitter is to appear in the photograph, it should be kept subordinate to the other details, and a brilliant carpet pattern is best covered by some quieter rug or mat. Skin robes or mats are often very quietly effective, and seem to hold the light which they receive in a way which has shown itself very serviceable in more than one instance.

The great point, however, in amateur portraiture is the illumination. The absence of a skylight, and the difficulties in the way of controlling the light which is to be had—these are the common causes of the defects to be seen in most home portraits. A room should be chosen with as high a ceiling as possible, and with a projecting bay window whose openings extend as high as can be secured. If there are other windows, let them be closed, so that the light shall come approximately from one direction. Never mind the exposure; west or south will do, if only the quantity and direction of the light can be controlled.

Place the camera close to the middle window, leaving only room enough to get behind it, and close the lower shutters behind the camera, leaving the upper ones above it partly open to secure a slight front illumination. Upon one side the shutters of the bay window should be opened entirely, so that the most brilliant light falls upon the sitter from that direction, and then by regulating the amount of opening upon the other side the shadows may be softened to any desired extent. At first the effect should be examined upon the focussing screen of the camera, which should be of the finest ground glass obtainable. Use the full opening of the lens, and focus upon the eyes of the model, and the definition of the rest will take care of itself. A microscopic sharpness, by which every thread in the garments may be counted, is readily obtained by using a smaller aperture; but such precision is not wanted.

Never mind about head-rests or their substitutes, but try to place the sitter in such an easy and comfortable position that such supports will not be needed. Avoid

straight lines in the composition, and if the lens is of sufficient focal length there need be no fear of undue distortion of points nearest the camera. Standing just behind the camera, direct your sitter to glance in the direction which in your judgment gives the best effect, and then selecting some object upon which the eyes may rest, the exposure may be made. With rapid plates, such as Seed 26, or Cramer 35–40, two or three seconds with bright daylight will be sufficient, using an aperture of F 8; but the beginner must expect to waste a few plates in gauging the light of his extemporized gallery. After having arranged the details of this part of the work, however, the amateur will soon find the photographic side of the work a matter of routine, and be able to devote his thought and attention to the higher and more artistic matters of posing, draping, and composition, in which, if he will, he may find a source of endless delight. HENRY HARRISON SUPPLEE.

## ZOOLOGICAL STUDIES.

THE *Deutsche Photographen Zeitung*, of April 9, 1890, treats its readers to a specimen of Ottomar Anschütz's Animal Photography. Herr Anschütz, who has made a special study of Animal Photography, is to be congratulated on the success of his efforts. To us there is, however, one great objection to all of the subjects from this source which we have seen, viz.: the painted-in or artificial backgrounds. We have seen a number of professional, as well as amateur studies, made in our own Zoological Garden, in Philadelphia, with natural surroundings, where the effect was far superior to the foreign pictures with background either artificially worked on the plate, or entirely eradicated, as is the case in the accompanying picture.

The *Photographic News*, of London, publishes a translation of Herr Anschütz's paper and methods, prefixed with an introduction of their own, on the subject, which originally appeared in the *Photographic News* many years ago.

About a quarter of a century ago an interesting article on the photography of brutes, written by Frank Haes, and read before the then North London Photographic Association, appeared in the *Photographic News*. The experiments of Mr. Haes seem to have been attended with no little difficulty and danger. In the first place, he complains that the prevailing colors, red and yellow, are not favorable for photography. Next, he was more or less unsuccessful, generally more, with the zebra and the ratel, and hyrax (the Biblical coney), and the kiwi-kiwi, the leucoryx, and the Syrian wild ass, the dingo, and the Tasmanian devil.

The chimpanzee was too ill-tempered to allow his portrait to be taken, and the innate modesty of the monkey possibly lay in the way of a successful picture. One variety of the simiæ, when everything was ready, would turn suddenly round and present a view which the artist by no means desired. Another variety would insist on looking steadily into the camera.

The goats had to be held by the beard, the weak point of the goat, and the iguanas by the tail. The African python chose to tie himself into a very complicated knot; and the confusion of the armadillo was such that it was difficult to determine which was his worthier end. The clouded tiger could not well be taken inside his cage because of the bars, and the space he occupied was, says the author of the article, too

small to admit of my introduction. There may have been other reasons for his not entering the clouded tiger's den, but he has omitted to declare them. The modesty of the monkeys has already been mentioned, but they appear to have been inferior in this virtue to the aye-aye. This singular nocturnal quadruped, the *Cheiromys madagascariensis*, which Cuvier placed among rodents, but was referred by Sonnerat to the family of makis, or lemurs, gave especial anxiety to the photographer. Its diffidence, whether natural or acquired, was extreme. When the camera was in readiness, it immediately covered itself with its tail.

Brute photography is better managed now than then. In the Zoological Garden of Breslau, and elsewhere, many excellent portraits have been taken. Of the method adopted in taking a bear in Breslau, the following description is given in a German paper:

The present month's number, No. 15, of the *Deutsche Photographen Zeitung*, presents its readers with two illustrated supplements: the one an instantaneous photograph of a bear by the well-known Ottomar Anschütz, of Lissa, the Polish Leszno in Russia, some forty miles south of Posen, signed on a portion of rock which the animal is mounting, "Ottomar Anschütz, Lissa (Posen), 1888." Of this a photogravure has been printed by H. Riffarth, of Berlin. The other is portrait, an original negative of Fr. Muller, of Munich. This is extremely well represented as a photogravure by the Art Publication Institute of Dr. F. Albert & Co., of Munich, and shows, says the German paper, what the treatment of Dr. Albert is able to effect in the ordinary taking of portraits. The treatment is even better adapted for this kind of photography, as we shall demonstrate, says the *Deutsche Photographen Zeitung*, in our next number, which will contain a group by Brokesch, of Leipsic.

With regard to the portrait of a bear, the reader is informed that the original sitter, or rather climber, is to be found at his present residence in the Zoological Garden of Breslau, which has been often visited by Herr Anschütz, as is well known, for the purpose of taking portraits of its inhabitants. We will, says the above-quoted journal, give our readers some little insight into the plan adopted by Herr Anschütz of taking wild animals, which he has himself kindly communicated to us.

The usual method of taking savage beasts in their cages has a good result only exceptionally, for the three following reasons. The first reason is that the lighting arrangements are not generally of the most convenient character; the second, that the narrow space in which the animal is confined hinders its free and natural motion; the third, that the iron bars of the cage are altogether out of place in the picture. Herr Anschütz, therefore, constructed for himself in Lissa a large enclosure or keep, in which he was able to take the smaller animals in various ways to his complete satisfaction. Foxes, wolves, and apes were also well photographed in this improvised animal studio.

But for the larger ravenous inmates of the Breslau Zoölogical Garden this enclosure was clearly not suitable, and these inmates could scarcely be transferred from Breslau to Lissa. Herr Anschütz then conceived the idea of building a larger and stronger kind of keep in the Zoölogical Garden. Through the courtesy of the directors of the Garden in Breslau, Herr Anschütz was able at the beginning of the year 1888 to erect a firmly constructed keep of strong planks of a superficial area of some 140 square metres. This enclosure was open above, but the walls had a height of six metres, which fulfilled all necessary requisites.

In an additional wing on one side of the enclosure there are placed three cages, serving for the sleeping apartments of the wild animals. On the side several underground passages lead into the enclosure itself. These are fastened with folding iron gates, and serve to facilitate the business of portraiture.

On the other side is an oblong aperture, furnished with an iron shutter. Here the apparatus is placed, commanding a view of the enclosure. As soon as the animal comes into the space commanded by the camera, the portrait may be secured. The background of the enclosure is a painted landscape, which is varied according to the habit of life, color, and size of the animal to be taken. Such variations harmonize naturally with the foreground, consisting of rock or stone.

When their photographs are to be taken, the beasts are caught and brought in a transport cage into the enclosure. After some time, and after they have become accustomed to their new apartment, they are photographed. The original pictures, as all of Herr Anschütz's studies, are of smallest size, and are afterwards enlarged.

A great difficulty often occurs in bringing the animals into the proper spot for their portraiture—that is, into the full sunshine. In this case hunger and thirst seem the only available roads to success. Living food is commonly distributed to the beasts on such occasions, whereby a more exact representation of nature and an increased effect is secured. The photographing of bears, says Herr Anschütz, is an especially difficult undertaking, since these animals manifest great unwillingness to enter the photographic studio.

Eight days were required to bring these refractory subjects before the photographic lens. Even fasting was unable to move their stubborn minds, and it needed an extreme degree of artifice to induce them to enter their respective cages. But *en revanche*, these bears behaved themselves, after they had once got into the studio, in a manner which was morally beautiful. Their general deportment was far more decent than that of other beasts.

And so Herr Anschütz was enabled to take over three hundred distinct likenesses of these regenerated brutes. Although, he says, I had on many occasions and with much zeal studied the character of Mr. and Mrs. Bruin,—or, as the Germans say, Herr Petz and Gemahlin,—I was nevertheless much astonished with the variety of their gestures and the general many-sidedness of their demeanor. The different sentiments of the mind are in no other animal so clearly expressed as in the bear. On several occasions I have been much surprised by their power of observation, and I have come to the conclusion that the bear is the wisest of the beasts.

The *Deutsche Photographen Zeitung* promises a description, at a later date, of the instantaneous apparatus employed by Herr Anschütz, an apparatus which was shown lately at the exhibition at Weimar. The manufacturer has, it seems, some additions to make, which will considerably change the character of the instrument.

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PORTRAIT photographers may find value in the suggestion thrown out by the *St. Louis and Canadian Photographer* recently, that a mirror be provided in the studio, in which the sitter can be shown his reflected image just before or at the time of the exposure of the plate. Many cases of "bad expression" might be cured by some such contrivance.

## SILVER PRINTING.

### A FEW EXPERIMENTS AND DEDUCTIONS THEREFROM.

ONCE more the question of permanency of silver prints has cropped up, and, so long as the process remains popular, may be expected to be of periodical recurrence. Much has been already said, and so much is known of the attributed vagaries of the process, that there is very little new to learn or suggest respecting it.

Recruits to the army of photographers are continually being added, so that the repetition of an oft-told tale has at least the advantage of newness to some one or other.

It strikes one forcibly that if only a tithe of all that has been known and written was remembered, it would leave little or nothing more to say. Permanency, to begin with, as connected with photographs, is a debatable term, and I do not think that any one giving thought to the matter will deny that the metals employed vary considerably in their powers of resisting atmospheric influence, and prints made by their aid seem to have a proportional resistance. We know that silver prints, made when albumen was first introduced for the purpose, are now in existence and good condition, and also that very many have become faded and obliterated; in fact, there is no disputing that the greater proportion of them have become faded and yellow—two distinct faults, by-the-by, which might have been confidently predicted of a process worked so largely, and in the incomplete and unintelligent manner that silver printing on the whole has been. If we know why faults exist, we ought to be able to apply a remedy, and this by carefully examining the methods used in their preparation; but then, influenced by the general consensus of opinion, almost entirely based on seeing so many defective prints, faults owing to all manner of slovenly and makeshift plans, as certain in themselves to lead to disaster as if the prints were deliberately put in the fire and burned, have been without further thought ascribed to the instability of the process.

Many years ago a number of skilled chemists took the matter in hand, and the result of their investigations was certainly adverse to the permanency of silver printing. The conclusions arrived at were not encouraging with respect to the permanency of the process. No satisfactory explanation has been given why some silver prints remain perfectly good for an indefinite time, and others, prepared apparently in a precisely identical manner, fade rapidly away. The unknown quantities to be dealt with are seemingly fatal to any definite conclusions being drawn. The paper itself may be good, bad, or indifferent, and may be responsible for the eccentricities of prints made on it, but over which we have no control; in itself sufficient to upset any theory or to vitiate any experiment. Albumen, also, or whatever does duty for it, varies considerably in quality.

At certain periods of the year much of the egg albumen is obtained from preserved eggs, and behaves differently from that from fresh eggs, and is less suitable for albumenizing. Albumen is also obtained from other sources,—another matter rather beyond the control of ordinary photographers, who do not as formerly prepare their own paper.

Independently of all this, there is no reasonable doubt but that a strong negative, printed on heavily-salted paper, sensitized on a strong silver bath, will give a more

permanent result than the system adopted nowadays, when most other qualities have to give place to modeling and delicacy. The results are undoubtedly more beautiful, but less permanent.

Without retouching (and the complaint of fading prints is almost entirely from portraitists), the majority of modern portrait negatives are thin images made up to printing strength by retouching, and it is to the lead pencil rather than to the real negative the photographer looks for effect, such negatives printed in the sun or very strong light giving but poor prints. The whole process is as much as possible contrived to give the best results from such negatives.

Many photographers make a practice of reducing their over-printed proofs after they have been finished, so far as their final washing is concerned, by re-immersion in strong hyposulphite solution or weak cyanide of potassium until the image is sufficiently dissolved out.

Prints reduced by either plan are probably less permanent than others not so treated,--at any rate the color is somewhat impaired.

Possibly the reducing action on the albumenate of silver, of which the modern prints are so largely composed, starts a decomposition that gradually continues till the proofs are worthless. Of course this applies to the first fixing, but is more pronounced with a second treatment, for it must be borne in mind that silver prints of the present day contain much less reduced silver and more organic matter than formerly, and are, as a matter of course, more easily affected by the hyposulphite and other reducing solutions.

The whole system of silver printing, as applied to porrtaiture in the present day, seems calculated to produce nothing but fugitive prints; they are certainly things of beauty, but not joys forever. The origin of the want of permanency is primarily in the thin negative; then follows printing on weakly salted papers, with a thick layer of albumen, and toning with a small quantity of gold. The fixing I believe to be frequently imperfect, and the washing afterwards very much too long. It is an undisputed fact that if prints are properly fixed, and the hyposulphite rapidly extracted afterwards, with a short washing to complete, they will be very much brighter and better in color and gloss than if the hypo is slowly eliminated and the washing continued for mauy hours.

This reduction of gloss by long washing seems to indicate that the albumen surface is partially dissolved by the long-continued action of water, and at the same time incipient decomposition presumably sets in, the very means intended to enhance the permanency having precisely an opposite effect. If the negative is strong and good, the printing conducted in strong diffused light, a reasonable quantity of gold used in toning, the hyposulphite bath good and sufficiently strong, the fixing thorough, and the washing effectual but brief, all precautions will have been taken that are required in the ordinary course of silver printing, and the results should be satisfactory in the matters of permanency and brilliancy.

The hyposulphite solution, which is a very important factor in the matter of permanency, may be inadvertently used too weak. The hypo may be bad in quality, so that when the required quantity is weighed out the solvent powers will be much below the standard; or, a large number of prints having to be fixed, the strength of the solution, being sufficient for the first lots, is not so for the last; the consequence is

a proportion of the prints partially fixed yellow and fade after a comparatively short time, the first remaining good.

The next cause why silver prints fade is owing to the mountants or the mount.

The mountants in general use are starch, glue, flour paste, and gum arabic; of these, starch is the most popular, and when pure perhaps as good as any. Starch and glue may, and frequently do, contain impurities that will destroy the silver prints; the pure articles themselves, when made up for mounting, may become deleterious by keeping, which indicates they should always be freshly made. The white powder starch used for medical purposes is the best kind for photographers. Good flour paste is not to be despised; it adheres well, is innocuous and cleanly.

The mounts themselves are frequently complained of. I am very doubtful if much harm accrues from this source. Some few years ago I mounted prints with starch and with gum on some of the common yellow-brown straw-packing boards and put them aside.

Up to the present time there is not the slightest trace of injury apparent. This sort of board has the credit of being particularly impure. I have sometimes noticed that when impure mountants are used with a brush the brush marks are distinctly shown by faded or yellow lines on the face of the print, presumably where a rather thicker layer of the mountant remained. If fading was inherent in the print it would show itself in patches, or it might do so if the mountant was spread evenly by a roller or other means. Providing the mount itself was in fault, patchy discoloration and fading would also take place.

Spreading spots with nuclei, indicate foreign matter, not necessarily connected with the preparation of the print,—in all probability particles of a sulphur character. Metallic spots on the paper are visible and at their worst as soon as the print is finished; they never spread afterwards. Mounted prints usually begin to fade and go yellow at the edges, the fault gradually spreading inwards. This is generally attributed to the action of the atmosphere on the less protected parts—the edges. If this theory is right, unmounted prints, to which the air has free access all over, should be the first to fade; but, as we know, the contrary is the case. The conclusion one naturally comes to is that the cause of fading is either in the mount or mountant, and not in the print itself. That modern prints more rapidly deteriorate than those prepared years ago seems to be because they have not the stamina in them to resist pernicious influences, even if carefully prepared in all stages; and as many are not so prepared from a chemical point of view, thousands come to grief, and poor silver printing gets more and more the character of an unreliable process without deserving it.—*British Journal of Photography.*

EDWARD DUNMORE.

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AMATEUR PHOTOGRAPHERS, BEWARE!—Farmer Wayback—Say, wife, han' me out the shotgun, the big horse pistol and my old huntin' knife.

Mrs. Wayback—What d'ye mean, Phelam, by takin' them to the field with ye?

"Well, I understand there's a band of premature authographers or some kind of outlaws comin' through the country takin' farms and everything else they set their eyes on. I calc'late to make it pretty lively for 'em if they try to take my farm in broad daylight."—*Chicago Post.*

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WASHINGTON'S HEADQUARTERS AT VALLEY FORGE.

(DEC. 19, 1777—JUNE 19, 1778.)

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JULIUS F. SACHSE.

PHILADELPHIA PHOTO-ELECTROTYPE CO.,
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## THE WASHINGTON HEADQUARTERS AT VALLEY FORGE.

THE traveller on either of the two great iron highways which skirt the Schuylkill on opposite sides of that river at a point twenty-three and a half miles northwest of Philadelphia, may notice, if he be so disposed, between two high hills, on the western side of the stream, a small ravine, through which flows a turbid creek of some volume, emptying into the Schuylkill just beyond the great stone arch which there spans the ravine. To the casual observer there is nothing strange or remarkable in either the creek, hillsides, or the general situation; however, to the student of history, and the true worshiper of liberty at the shrine of freedom, the mere mention of the name of the locality, "Valley Forge," calls forth memories of Washington, and pictures the scenes of patriotism, privation, and sufferings endured by the patriot army during the memorable winter of 1777-8, which was the darkest hour of the struggle, and proved the turning point of the war which was destined to assure universal liberty to the inhabitants of the land from the Atlantic to the Pacific, and from the ice bound banks of the St. Lawrence in the North, to the burning sands of Mexico in the South. Here in this rugged vale was kept alive the flame of liberty in the gloomiest period of our national existence, and it has been well said that nowhere else in the world's history have we any record of greater self-sacrifice than was here shown by the rank and file of the patriot army.

In addition to the historic associations connected with this ravine and the sloping hillsides, this immediate locality offers probably more attractions to the amateur photographer and the lover of nature for "romantic bits" than any other spot for miles around. The placid dam, the crystal stream, the steep hillsides of Mounts Joy and Misery, the rugged rocks, gnarled oaks, with the rank and luxurious vegetation, all offer food for the camera.

On the day the current number of the JOURNAL is issued, it will be just 112 years to the day, that the patriot army,—an armed mob no longer, but now a thoroughly disciplined army,—left their winter quarters on these hill sides, filed down the ravine in review before Washington at his headquarters, and sallied forth to overtake the retreating British, and defeat them on the plains at Monmouth, thereby proving that the experiences gained on the rugged hillsides of Chester County had fitted them to cope with the best troops of England and Germany.

We have chosen for our illustration the old mansion house occupied by the Commander-in-Chief as his residence during that memorable winter, and since known as "Washington's Headquarters at Valley Forge." The building is still in almost the same condition as when occupied by Washington; the immediate topography, however, is completely changed. In colonial times a grassy slope or lawn extended to the Valley creek on which the house fronted; the same was the case towards the slight bluff on the Schuylkill, which was then a limpid fordable stream. The ford at that place was known as the "Fatland Ford." It had an ordinary depth of from eight to twelve inches of water, and was celebrated for its smooth stony bottom. The building of the canal and railroad some time after the revolution, together with the erection of additional mill seats, completely changed the situation. It is not within the scope of this paper to give an extended history of the old house, which was built by the Potts family about 1760, who then owned the "Mount Joy" or

"Valley" Forge on the side of the creek about five-eighths of a mile further west, and which was destroyed by the British during the revolution. (September, 1777.)

When the house was selected by Washington for his head-quarters it was occupied by Isaac Potts. It is a substantial stone house of the colonial period, built of dressed stone with pointed joints, two and a half stories high, and measures 24 by 33 feet, and was particularly appropriate for Washington's uses. The iron-master who built it had not alone introduced a number of secret doors, drawers, and receptacles into the paneling of the rooms which, were of great use to Washington, and are shown to the present day, but had also provided two secret avenues of escape from the house; one of these opened through a sliding panel from a closet in the room occupied by Washington to the side door shown in our illustration; the other avenue of escape was by means of a subterranean passage way from the house to a clump of bushes on the bluff at the river side. The passage way was about 300 feet long, and also led to two large vaulted chambers some distance from the house, about 20 feet square and 12 feet high. For what purpose these chambers were constructed so far under ground is a mystery to the present day. When the Schuylkill canal was built and a dam constructed, the water was backed up and filled these chambers and passage-way, and their very existence was forgotton. A few years ago, however, the passage was rediscovered by accident, and an attempt made to shut the water off and reopen the caverns. This, however, was but partially successful, when it was the good fortune of the writer to photograph that portion of the passage by the aid of Blitz-pulver. The house and grounds are at the present time in the possession of the "Centennial and Memorial Association of Valley Forge," who are striving to purchase the whole camp ground, so that it may be held in trust forever as a "Shrine of Liberty" for the generations to come. JULIUS F. SACHSE.

*Leopard, June 1890.*

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AMONG the countless contrivances invented to supply the wants of the legion of amateur photographers, the latest is a folding Ruby Lamp, which will no doubt supply a long-felt want to photographic tourists. The lamp is built up upon a sheet of tin which carries the two sides and ends hinged around it. This forms the back of the lamp, and upon its inner side are a couple of grooves, into which a parallel-sided length of ruby glass is inserted and carried in safety. The sides of the lamp, as we have before said, are hinged to the back, and when opened out just allow the strip of ruby glass to be inserted in the grooves, and this forms the fourth side (and front) of the lamp. The two side pieces are also provided with ruby glass and furnished with oval apertures. The end pieces, or top and bottom of the lamp, fold over in the opposite direction to the sides when the lamp is folded, laying nearly flat against the back. These fit over the edges of the side pieces, and perfectly keep out all light except that which passes through the ruby glass. The bottom is provided with a holder for night light or candle, and the top as well as the bottom with protected apertures for the admission of air. The lamp can be put into working condition in a very few seconds. When folded it occupies but a little space, and when ready for use provides a lamp of really large and serviceable size. It is one of the most compact and useful articles of the kind in the market.

## FIXING PLATES.

IT is now conceded by all good authorities on bromide paper printing, that stability or permanency largely depends upon thorough fixation of the print. This same assertion has often been made concerning the ordinary silver print on albumenized paper, and is also quite true.

But the conditions involved in the making of bromide prints are so different from those in silver printing that it will not be amiss for us to compare them and see why the necessity for thorough fixation is so specially urgent in the case of the bromide print. Almost every one knows that the bromide print is made on a gelatine emulsion, while the silver print is made on a surface of albumen. The bromide print is the result of a process of development, while the silver print is "printed out" as the phrase goes. The albumen forming the vehicle for the sensitive compound in the silver print is an exceedingly thin layer; while the gelatine, which correspondingly forms the vehicle for the sensitive salt in the case of the bromide print, is very much thicker and heavier. The gelatine layer absorbs a large quantity of water, and swells to still greater thickness during the development and finishing, while the increase of bulk of the albumen layer of the silver print when wetted is so slight that it may be practically disregarded. Lastly, the silver print depends for good quality largely upon the keeping of the picture upon the surface, while the bromide print is rather one of those kinds where the image penetrates more deeply.

For the benefit of those of our readers who have never made silver prints, we may say that one chief point requiring attention is the condition of the fixing bath of hypo-sulphite of soda. This salt, although highly soluble in water, is quite unstable chemically, and is particularly susceptible to decomposition in the presence of acids or acid salts. Every care is taken that nothing of the kind is introduced into the bath. When the prints are "reddened" by means of acetic acid, they are always well washed before reaching the fixing solution.

This brings us now to one of the points that we feel sure is often overlooked by makers of bromide prints. Everyone conversant with the process will remember that when the development is concluded it is necessary to rinse off the developer with weak acetic acid in order to prevent foggy deposits and general discoloration of the print. The extreme weakness of the solutions generally used—say one drachm of the acid to thirty-two ounces of water—being overlooked, the prints are hurried into the hyposulphite without sufficient washing, and a highly undesirable decomposition is forthwith set up. The products of this decomposition are numerous; sulphur, sulphurous acid, and sulphide of silver being the chief ones. Supposing that the developer had been but imperfectly removed by the acid, there would also be more or less oxalate of iron present.

Even if the bromide print were thus carelessly and ignorantly made, it would nevertheless have fair chances of permanency when compared to the ordinary silver print. It has long been known that photographic images produced by development are more permanent in their character than those which are "printed out."

But there is another point connected with the fixing of bromide prints that we must not neglect to speak of. If permanent results are expected, *time* enough for the hyposulphite to fully do its work must always be given. And it should not be

forgotten that the hypo really has a double task to perform: first to convert the unaltered portions of the gelatine-bromide of silver into a soluble form, and secondly to take them up or dissolve them. Besides this, the process has to be done throughout the whole mass of a tough gelatinous layer that is comparatively slow to receive chemicals, but slower still in parting with them.

Those who can look back to the early experiments with gelatine negatives will remember how many failures were caused by imperfect fixation of the plates. To those used to working collodion plates, it seemed impossible that so long a time was required for thorough fixation. But painful experiences taught us what we now know about the matter.

Before concluding, let us give a few words of practical advice. If silver prints are being made, see that before fixing they are well washed free from acid, if this be used for reddening. Let the fixing bath be rather large in quantity, *not too cold* in winter, and see that the prints are well worked about in it. Twelve or fifteen minutes would be a fair time of immersion. If bromides are the work in hand, see that the prints are likewise well washed front and back in running water before laying in the hypo pan, and do not hurry the prints out when once they are in. The mere disappearance of the yellowish tint of the unaltered bromide of silver is not proof that the print is fixed. Additional time should be allowed, just as in the case of negatives, which can not safely be removed from the fixing bath as soon as the shadows clear. Twenty minutes' immersion for the bromide prints would, in most cases, be none too long. The prints should never be allowed to stick together so that the solution will not pass freely between them, but, as we before said, they should be well moved about. Care must be taken that while doing this the soft gelatine surface is not injured or scratched. Silver prints will bear rougher handling, the albumen surface being thoroughly coagulated and hardened.

The first washing waters for both varieties of prints should be rapidly changed, and the prints not allowed to stick together in batches, or sink down to the bottom of the vessel and lie on the bottom. Neglect of this caution in silver printing often makes yellow prints.

ELLERSLIE WALLACE.

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THE latest photographic novelty is thus noticed in the *Amateur Photographer* (London), which gravely informs us that the automatic photograph machine, of which M. Cheron is the inventor, and Messrs. Salter, of West Bromwich, the makers, is, mechanically, a success. The victim gets on a stand two or three feet from the machine, puts a penny in a slot, and looks intently in a small mirror just above the lens. The exposure lasts for a couple of seconds, when a small bell rings to indicate that "all is over." A noise of clockwork is then heard inside the machine, which indicates that the plate is passing through the developing, fixing, and washing baths. Then something is heard to drop into a small box in front of the machine, and on lifting the lid a portrait on a sheet of thin iron is seen—a "tintype," in fact. For a halfpenny dropped into another slot a gilt frame can be obtained. A party of capitalists, as well as of Pressmen, have been down to see the machine at work, and during this visit the machine "took" two hundred photographs with complete success. It is able to take three hundred before it requires re-charging. An electric light can be fitted for portraiture at night, if necessary. Patents for this machine have been secured in twenty-six countries.

## AMATEUR EXPERIENCES.—III.

EDITOR AMERICAN JOURNAL:

I AM happy to say that I have a more cheerful report for you this month.

The usual monthly meeting of the Leopardville Camera Club was held on Tuesday night last, Rev. W. A. Lense, the president, in the chair. The secretary, Miss Carrie Kase, read a communication from the president of the Turkeytown Tripod Club, asking for an interchange of blue prints,—between the members of their respective societies. On motion the communication was laid over for further consideration.

The secretary also stated that illustrated catalogues had been obtained gratis from several dealers in photographic supplies for the use of the members. A vote of thanks was tendered the donors.

The Committee on Membership, through their chairman, Mr. Dense Fogg, stated that they were prepared to report on the three applications for membership, secured since last meeting. In the case of Hawk I. Keen, Esq., and Master Fritz Leberwurst, the report is in favor of the applicants, while on Mr. Aaron Shoptition the report was against the candidate, further that the report may be received, the committee discharged, and the candidates balloted for.

The motion had no sooner been made than quite an animated discussion started up. Mrs. Philomene Codaque asked what objection there was to the last named candidate, in this she was seconded by D. P. Tray and Miss A. C. Cessori, both active members of the club.

Mr. Fogg replied that Mr. Shoptition was merely a storekeeper, and that it was not desirable to lower the morale or social tone of the club by admitting a shopkeeper.

Mrs. Codaque, in reply, stated that no one could say anything against the character of Mr. Shoptition, and that he was enthusiastic on the subject of photography, and had already bought "How to make Photographs," and that was the kind of members that were wanted, even if they were shopkeepers.

Miss Cessori endorsed the previous speaker, and added that if Mr. Shoptition was elected he would at once procure a Model 4x5 outfit, and become an active member.

Mr. Snapschotte then ventured the question on what grounds the other two candidates were reported on favorably.

The chairman answering that as Mr. Keene was the wealthiest man in the vicinity, it would not do to offend him, although he knew no more about photography than the cow did of the moon, and cared less, but as a matter of policy he would have to be elected. As to Master Leberwurst, he was a youth whose indulgent father had bought him a 10x12 Waterbury outfit, and as it was the largest camera for miles around, it would be a good thing to elect him, so that the members could have his outfit to fall back on.

Mr. Eks Posure replied that what had been said was all right and well as far as it went, but one thing must not be forgotten,—and that was that almost every member of the club dealt with Mr. Shoptition for the necessities of life, and most all were

in his debt. If we reject him he will stop our credit, and this was very important.

On motion of Mr. Rochester Ross, a vote was taken, and the three candidates declared elected.

Deacon Al. Bumen now arose for information. He stated that during the winter he had solicited subscriptions for an eastern illustrated paper, and in due time had received his selected premium, viz : a complete photographic outfit, as the circular stated, of the latest and most complete kind. In this model outfit the patent camera was so constructed that it done away with the use of any lens, a small rapid rectilineal hemispherical aperture taking the place of the lens, which, latter as the prospectus stated, was expensive, always unsatisfactory, and rarely if ever true. The patent camera was here shown, examined and commented upon, as were the two specimen prints which had come with the outfit.

The Deacon stated that he had exposed the whole of the six plates which were sent with the outfit, used the chemicals as directed, but only obtained a black leathery coating on the glass, in lieu of a picture. Now he wanted to know where the trouble laid, also if he could wash the plates so as to use them over again.

The President thought the plates were fogged during development.

Mrs. Codaque said that possibly the plates were overexposed.

Miss Kase asked the Deacon to describe his method of development, and give time of exposure.

The Deacon stated that he had followed directions; he had lit his yellow paper lamp, and put the plates in the holder, then set up the camera, focussed, then put in the holder, held his finger before the hole while he pulled the slide, then took his finger away, counted ten, and put his thumb on the hole, pushed in the slide, and went into the kitchen and tried to develop the plate; but it just turned black. He tried and tried again, but all came alike. He thought the plates must have been bad.

Mr. Snapschotte then asked him if he had carefully shut out all light before commencing to develop.

The Deacon replied that he did not think that was material, as his printed instructions only told him to open the package by his "ruby" light, and he thought that after the plate was exposed and the image was on the plate that he could develop it in daylight.

Mr. Fogg stated that there was the whole secret of the Deacon's failure, and requested Mr. Snapschotte to give the worthy Deacon some practical instruction in the development and manipulation.

The President then stated that Deacon Al. Bumen, who was an old man, deserved great credit for selecting the "Photographic Outfit Premium" for his literary labors during the past winter, and that it was the sense of the society that the youth of the community would do well to take pattern after the worthy Deacon in this matter as well as in other more serious ways, in which our fellow member stood as a shining light.

The Deacon in reply stated that as soon as he got in the way of taking pictures he intended to take the pictures of the sisters, to be sold at the next huckleberry party of the church, for the benefit of the cause.

At the close of the discussion Mr. Keene, one of the newly elected members, arrived and was introduced to the members, he was welcomed by the President and invited to a seat on the platform.

Several of the best efforts of the club were shown to Mr. Keene, who after examining them stated that they were only paper pictures, that the club was not up to the times, that lately a great discovery had been made in taking pictures, and he knew the man who found it out, and he was going to back him up, that where everybody could take pictures on paper, which would fade, and could be torn up, his man had found out how to "take 'em" on sheet iron which would'nt break, burn, or tear, it did'nt take any time to "make 'em," and the lips and cheeks looked as fine as any painting. The financial magnate of Leopardville here produced his "Iron Photograph," it was looked at with awe and wonder by the President.

Miss Kase suggested that it was a "Tintype."

The mere mention of this stirred the ire of Mr. Keene. "Excuse me, Miss, there's no tin about it, it is genuine "Rooshay Sheet Iron."

Mr. Snapschotte suggested that it certainly looked like a great invention, and inquired as to the probable cost.

Mr. Keene replied that, that was not a fair question, that he advanced money to the man to perfect his invention, and he expected to make a fortune out of the thing, but that they would sell pictures 3x4 in. at one dollar each.

Mr. Fogg asked if that was not rather high.

Miss Keene stated that tintypes were sold all over town as low as 36 for a quarter.

Mr. Keene at once put his foot down and stated that he wanted it decidedly understood that there was no tin about the invention.

To stop the discussion, so as not to anger our social magnate, fearing that if it went any further he might discriminate against our members at the next social reception, Mr. Fogg moved that the first outing of the Club take place a week hence if the weather prove favorable.

Seconded by Miss Kase, with the suggestion that the Club for the day resolve itself into an "Arbutus party."

Adopted unanimously.

On motion adjourned.

J. FOCUS SNAPPSCHOTTE.

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NEW FLASH LIGHT FOR PHOTOGRAPHING.—At a regular meeting of the Washington Chemical Society, held recently, Dr. Thomas Taylor, of the United States Department of Agriculture, exhibited a new flash light intended to take the place of several kinds which have of late proved highly dangerous in practice. The composition of Dr. Taylor's new flash light consists largely of charcoal made from the silky down of the milk weed, a form of carbon which he prefers to all others, because of its freedom from ash. A few grains of this new composition placed on tissue paper and lighted by a punk match produced a prompt and blinding flash, while it was observed that the paper on which the powder rested was not even scorched. The flash being instantaneous, the heat is not sufficient to ignite the most inflammable material on which the powder may rest. Dr. Taylor demonstrated this by using, with the same paper for a base, an inferior flash light, which set fire to the paper at once. This is owing to the comparatively slow combustion of the chemicals used in the inferior grade. Dr. Taylor said that the powder of his new flash light will not explode either by concussion or friction.

## THE "CROTONWANZE" ONCE MORE.

WHEN we sounded our note of warning in the January JOURNAL respecting a fresh danger that threatened the American dry plate industry, we had but little idea that the matter would become one of international importance, therefore it is with pleasure that we inform our readers on both sides of the ocean that the incipient danger has passed, the dark clouds have been dispelled, and once more the photographic horizon is clear and bright without the least sign of fog. In reply to our query in the March JOURNAL, Dr. A. Miethe, of Berlin, the well known editor of the *Photographisches Wochenblatt*, in No. 17 of present volume, answers: viz.—

"Our friends in America have shown much pleasure that we so well understood their Cimex joke, as set forth in our Letterbox notice;—as our readers will no doubt recall the fact, that at the time we referred in our "Repertorium" to an article from an American newspaper in which mention was made of a mythical insect, which had developed an especial appetite for the American dry plate. Under these circumstances we could not refrain from warning our readers against the use or purchase of any American dry plates, so as to prevent the introduction of this dreadful insect, which threatened to prove more destructive than the Colorado potato beetle, and if possible to obviate this great danger. Immediately afterwards there appeared in an American magazine* a well meant sally against German thoroughness and credulity.

"In reply, we mentioned seriously as the occasion offered, that an organism outside of the Crotonwanze did exist,—a fungus, which formed on damp gelatine dry plates, and that in the process of formation, growth or existence, so changed or affected the photographic proprieties of the affected plate that after exposure and development such plates showed numberless transparent spots, and consequently were rendered useless. We suffered heavily during the past summer by the appearance of these organisms," writes Dr. Miethe, "and only overcame the difficulty by a thorough disinfection of our dark chest with carbolic acid, and fumes of bi-chloride of mercury. The plates which had been thus affected, as a matter of course were lost or spoiled, and herein the friendly editor of the AMERICAN JOURNAL OF PHOTOGRAPHY has misunderstood us.—(Vide *Am. Jour. Photog.*, March, 1890, p. 89).

"We hope," continues the *Wochenblatt*, "that the little bug which threatened to assume the proportions of an immense sea-serpent has been scotched or decapitated, a 'Prozedur' that we are glad to have aided in accomplishing." We of the AMERICAN JOURNAL OF PHOTOGRAPHY also claim a share of the glory in bringing about this end, and thank Dr. Miethe for his courtesy and information, and close with the good old motto, "*All's well that ends well.*" J. F. S.

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CLARA—"Well, Aunt, have your photographs come from Mr. Snappeschotte's?"

Miss Maydeval (angrily)—"Yes. And they went back, too, with a note expressing my opinion of his impudence."

Clara—"Gracious! What was it?"

Miss M.—"Why, on the back of every picture were these words: 'The original of this is carefully preserved.'"—*Pittsburg Bulletin.*

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* AMERICAN JOURNAL OF PHOTOGRAPHY, January, 1890.

## PHOTOGRAPHERS IN PARIS—THEIR STUDIOS AND WORKSHOPS.

M. CHALOT catches the sun at 18, rue Vivienne, where a small window shows off a few of the platinums by the firm. Through a courtyard and upstairs one arrives at a grand "reception" room, which it would be hard to equal. It is preceded by a tiny entrance lobby for coat and hat-racks, and made pleasant by plants in boxes. The beauty of this fine receiving-room consists above all in the exhibition of the platinum prints, mingled judiciously with the carbon and silver portraits and colored enamels. A microscopic examination shows them to be soft pictures, ranging from pure white to positive black, and indescribably soft in the vignetting, as if they were on opal. Another paper has deep brown tones called "Japon." Some of the prints are water colored, and the most æsthetic English water-color painter would find nothing to criticise here, so thoroughly good is the work. M. Chalot claims the platinum process worked by him to be a special one, and his formula is kept secret. To produce such photographs is indeed worthy of a patent. He rightly terms the ordinary process a coarse and unsatisfactory one, and there is certainly no comparison between the two. It is the more tantalizing to find his negatives extremely thin, such as would give nice prints with aristotype paper. Evidently the restraining solution in the platinum salts accommodates, by the quantity used, a mere phantom of a negative. No trouble is taken to make special *clichés* for platinum printing—rather the reverse. He prefers Guilleminot's plates above all others, and always uses oxalate developer. The paper is almost orange color when sensitized, and resembles the ordinary material. In the rooms for preparing it are the usual glasses for spreading out and coating the sheets, properly constructed drying box, and large trays on tressles for developing, etc. The printing room is a model of its kind, and fitted at sides and roof with white blinds to foil the sun. His studio is small, but all sufficient, and "poses" are made at either end. It has blinds that roll up from the bottom or down from the top of the side windows; otherwise, the horizontal two-feet wide sliding curtains, etc., are the same as with other ateliers. A very fine instrument is the camera by Jouté—about fifteen inches square—the lens being a Voigtlander. Each of the usual departments is arranged with more thought than is noticeable in many houses. The dark room is not very large, so the plates are taken to the well-lighted toning rooms to be washed, and here they are placed upon a slatted frame, like a flight of stairs, over the wash-tank. At the top is a long pipe with fine holes. From this the water "sprays" on the top row of plates, and falls by gravity on to the next, and so on to the bottom. The tanks for toning, fixing, and washing resemble slate, and are neatly fixed all round the rooms at the same level. For washing the prints a guttapercha sheet, perforated with large holes, is fixed at half the depth of the tray, and a swan's-neck-pipe in the tank discharges *under* this sheet, so that the water is always rising through the holes underneath the prints. To spill water about the floor matters nothing, for it is completely leaded, and has a covering of open wood framework. So cheerful a spot is not often found in a photographic workshop. For enlarging, a complete apparatus is installed, with means for making the oxygen used—a holder four feet by twenty inches diameter being filled in three-quarters of an hour. In same room as last apparatus are the wash-troughs, boiler, etc., for carbon. Enamels appear to be their

chief work in pigments. Daylight enlarging apparatus is complete in another room elsewhere. Near to the two printing rooms is a case with glazed front for use of printers to place negatives for, or out of, print, and are thus contained in grooves instead of being left in frames or filled up in the workshop. Complete as are the other departments, remark is only necessary on the office, which surprises one directly on leaving the magnificent reception or show room, for here behind the curtains a counter of the most uncompromisingly business style is found manned by three clerks. It has been noticed in some establishments "Payments positively in advance," and the business-like "caisses" in others certainly leads one to think that a photographer might be "left," like a tailor, without proper precaution. Hence the necessity of ostentatiously introducing the desk in some place where customers are bound to pass.

On the Boulevard de Capucines, opposite the junction with that English street rue Scribe, is located a very well-known and high-class house, formerly Van Bosch, but now Paul Boyer. English visitors soon know it as a place at whose entrance are seen very remarkable photographs of stage scenes, made by aid of the magnesium light, and of artistic studies of actors in costume. These are a striking feature also in the pretty reception room, but the excellent portraiture shows it to be only a branch. A decidedly novel idea is observed in the reception room of this "bijou" establishment, a large aviary at the end of the room, formed by netting off the whole width, a painted background, rockery, fountains, plants and rare birds make an agreeable scene, to which the sitters wander instinctively, and there behind the curtains find a small clerk's desk, excellent thought! Bronze vases, lounges, divans, and curtains are not lacking in this elegant place, and his patent "photo-glora" transparencies decorate the windows (bromide transparencies surrounded by dried natural flowers on the backing glass), and special Boyer stereoscope, whose large square glasses bring out the relief in photographs with remarkable power while looking through them at a foot or more distant from the eyes.

A double staircase runs up immediately into the posing gallery. Here a good north light is obtained, with side windows overlooking the street. Ilford plates are used with lenses of his own combination. Artificial light for exposure is always available, but not much required. A short passage brings one to the dark room where gas is laid on in the lantern; a corridor is stocked with negatives in shallow boxes; sensitizing, toning, and washing rooms are just under the printing roof, and on the latter the superb printing of Boyer's goes on with very ordinary apparatus. Yellow curtains are hung over the "filling-in" place for silver, and the bad light in which this operation is often carried on is unknown here, to the greater convenience of the *employés*. Another small room out on the open is reserved for the platinum frames and filling-in. The London Platinotype Company's paper is used as being the best, and is bought ready prepared. Carbon is sent out of Paris, as per the London practice. M. Paul Boyer, besides his remarkable theatrical scenes, is an expert in outdoor instantaneous work, as when the President journeys about France on state celebrations, M. Boyer photographs him in the midst of the thronged celebrations from off steamers, quays, roofs, and bridges, in spite of rain and wind, and on plates of about ten inches by fourteen inches, with a Ross lens and Hare camera. A glance over the work shows intrepidity and skill of the operator, and these views are reproduced afterwards in the form of a book with text. The really

wonderful views of distinguished companies in the Elysée were made by his own magnesium apparatus, called "Boyer Eclair," and so far they remain in advance of anything ever done yet. Honor alone remains the chief remuneration for these numerous works made out of the studio. M. Boyer has held the business since 1886; he is young, with indications of a determined will, and in appearance decidedly English, but he has an elder *confrère* who approaches that very much more—verbally.

M. Bannel's studio on the Boulevard des Italiens is well-known, and was the former establishment of Disderi. It is small, but shows many good points, as is very often found to be the case where the photographer is his own operator, and takes a thorough interest in all details of the business. Very pretty carbon prints and "blocked-out" platinums attract especial attention. In the former he makes his own special tissue in every imaginable color that is pleasing to the eye for portraits, and the artistic appearance of his prints is said to be possible only by his process. He does not know of good commercial tissue, but considers the Autotype Company's the best. Studio has the usual form of French roof ridge, extending whole length of the gallery, and fitted with two-feet curtains sliding on a great number of light wires also running the whole length of room, permitting a variety of light effect. Dallmeyer is his favourite lens. The dark room at end of studio is lighted by a lantern, the round top of which lifts off with the bulb of a powerful incandescent light, so that it can be hung up whenever needed for general illumination. Ilford plates and potash developer are the results of his trials of many kinds. The washing room for carbon work runs across at the other end of the studio. Here in a neat, orderly place are conveniences in the shape of moveable trays that permit of working an exceptionally large size in a small space. A boiler of ample capacity is heated by a number of perforated gas tubes. His experience for treating badly over-exposed prints is not to soak them with hot alkaline water, but to gently run the hot water over the dark place, at the same time dropping a solution of ammonia in the stream. Development is concluded with alcohol—an old practice. Sepia and red chalk are the colors most preferred. Carbon, silver, and platinum go on above this last place, but this, as well as the other offices, present nothing specially noteworthy. M. Bannel evidently regards his work with something more than a desire to meet expenses.—*C. R. K., in Photography* (London).

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IN an interesting paper which Captain W. de W. Abney contributes to the London *Graphic*, in which he mentions a number of things as "what photography will not do," he states: "One more point is that photography can never be strictly truthful as regards light and shade. If the high lights in a photograph be accurately depicted on a paper print, the shades will be found wanting in correctness. This is an inherent defect in photography, even when black and white only have to be reproduced. But besides this we have another inherent defect, in the difficulty in portraying colors in proper relation to one another. A photographic plate is more sensitive to some colors than it is to others; and although modern improvements have lessened this defect, and may still further minimize it, yet the want of truth of rendering shades correctly must always remain. Perpetual motion will probably be a thing of the past when truth in photography is still non-existing."

A NEW HALF-TONE BLOCK PROCESS.—The ordinary method of producing half-tone printing blocks is tedious and uncertain; tedious on account of the many operations necessary; uncertain because of the ever-varying strength of the light, and the low degree of sensitiveness of the substance used for printing the resist image upon the zinc.

This uncertainty renders it almost an impossibility to undertake etched half-tone blocks strictly to time; the fine screens used for the best work entail very careful printing, the use of a quality of paper and ink quite out of question for cheap and rapid printing, and if the grain is coarser to suit coarser paper and greater speed, the half-tones are quite lost, and the result far from good.

These drawbacks are *all* removed by a process invented by Mr. Sutton, of Ballarat, Australia, by which printing blocks in half-tone can be produced with certainty in a few hours, as the relief matrix is a gelatine plate.

These blocks for quick printing are wonderfully deep, and may be printed with good results where an etched half-tone block would entirely fail.

The process is wonderfully ingenious and simple, and is as follows:—From a photograph, or a washed drawing, or an original subject, a grained negative is made upon a gelatine bromide plate; this negative, after fixing and washing, is subjected to heat, and at once converted into a relief matrix, from which the printing block is made in the form of an electrotype,—in itself the best form of printing surface known. The time occupied from beginning to end will not much exceed that necessary for making the electro.—*Photography.*

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THE Cramer Dry Plate Company have published a pamphlet giving a series of new formulas, which in their hands has proved to be best adapted for their make of plates. We recommend this pamphlet to the notice of all photographers.

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BLUE PRINTS ON ALBUMEN.—J. T. M., in the *Scientific American*, says: "Very pretty effects may be produced by printing on ordinary albumen paper, sensitized with the following solution:

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| Citrate of iron and ammonia | 3¾ drs. |
| Dissolved in water | 2 oz. |
| Red prussiate of potash | 2½ drs. |
| Dissolved in water | 2 oz. |

Mix equal parts just before using, as the mixed solution will not keep, and float the paper as on the silver bath, film down, for half a minute or so, and suspend by one corner in a dark room to dry. Detail can be brought out almost equal to silver prints, while the ease of working and the cheapness make it quite desirable. The prints can be mounted and burnished. Do not try to keep the paper sensitized, but make up fresh when wanted.

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GROUNDGLASS.—To obtain a fine groundglass, proceed in the following manner: Fill a cup half full with water, add some emery, agitate the whole, and, after reposing five minutes, decant into another cup; at the end of the same space of time again decant into a third cup. There will remain each time in the cups emery of a different size. Commence the operation with the coarsest to finish with the finest. In this way you will obtain a semi-transparent surface upon which it is possible to trace the most delicate lines.—*L'Amateur Photo.*

## PHOTOGRAPHY—THE SCIENCE AND THE ART.

WE often hear photography spoken of as the Art-Science, a combination of terms which seems somewhat contradictory, but which is really most comprehensive and accurate. Science has been defined as "knowledge reduced to a system," and when examined from this standpoint, both in its details of operation and in the methods of its application, photography may fairly claim to be one of the most exact branches of science. It is indeed not without its experimental side, in common with all branches of science, but in the present acceptation of the term the camera is as much a scientific instrument as the engineer's transit or level, and for scientific purposes its uses may be acquired as methodically.

The application of the camera and its work to scientific pursuits has, however, not generally been regarded altogether as legitimate as some other instruments, and for a rather curious reason, namely: that it is rather an artistic than a scientific instrument; while at the same time the artist is sometimes disposed to give the camera the cold shoulder because, forsooth, it is a scientific instrument; and so, while claiming to be an art-science, photography flits midway between the two camps, like the bat in the fable, and is not fully accepted by either side.

Now, photography is really a science, and is also as thoroughly an art as is any other division of that much-abused term; but it is not both at the same time, and without reopening an old discussion or stirring up old antagonisms, it may be worth while to examine somewhat the difference between the scientific and artistic applications of photography.

When the discoveries of Daguerre, and Niepce, and Talbot first made photography practicable, the immediate thought of every one was of its application to portraiture; and even to-day, if one speaks of a photograph, without any further definition, it is generally understood to mean a portrait. Landscape photography, before the introduction of modern dry plates, was so little followed as to be of minor importance, and with the exception of some professional work in architectural photography, the artistic side of photography was mainly limited to portraiture.

Since the advent of the amateur into photography, however, we hear much more about photography as an art, and the ease with which the operative details of manipulation are mastered has made it possible for men of cultivated artistic tastes to exercise talents which might otherwise have remained purely critical. The result has been the development of what may properly be termed a "school" of artistic landscape and group photography, consisting of a number of earnest men of true artistic taste, whose time and opportunity have not permitted to acquire the technical skill with the brush or crayon or etching needle, which in former days would have been necessary to make their talent evident, but who can with the aid of the camera show their ability and gratify their own artistic sense in a manner otherwise unattainable.

Dr. Emerson, to name but one, has amply demonstrated by his published works how fully comparable the work of the camera may be made to the work of the needle and acid; and there are not wanting to-day those who openly express their preference for photograph to etching. The details of the latter process are quite as mechanical as those of the former, and the absence of color is chargeable to both

alike, and to what extent the public opinion upon the subject is due to the influence of unreasoning fashion, the reader can judge.

The artist photographer does not use his smallest stop for the purpose of obtaining the painful microscopic sharpness of definition which the mechanical taste may deem essential; he does not need to be taught any cast-iron rules about the direction of the light, or the introduction of the inevitable foreground stump. When his negative is made he does not improve (?) it by printing the sky full of clouds whose lighting gives the lie to every shadow in the picture. Indeed, his work is as marked by what he does *not* do as it is by what he does, and if he succeeds at all in any degree, he succeeds in leaving the impress of his own taste upon all his work.

Turning now to the use of photography as a science, it will be seen how different and yet how legitimate its claim to the title may be made.

Probably the use of the camera for astronomical purposes is one which would first suggest itself as a scientific application; but as a matter of fact stellar photography—while most valuable and interesting—can scarcely lay claim to the highest place under this head. The modern science of Photogrammetry, using as it does the image on the plate in connection with measured horizontal and vertical angles, the whole to be combined with a similar record made from another standpoint to form an accurately plotted survey, is a far better example of the use of photography as a science. So, too, the boundless field of photo-micrography, and the use of the camera as a record for scientific experiments whose truth is beyond impeachment—these need only to be mentioned to be recognized as scientific uses totally distinct from the artistic use of photography.

The distinction between the two terms can readily be kept in mind, and if the artist would only remember that the camera belongs to him as an instrument of his art as much as do his brushes and his pencil, and if the engineer would also recall the fact that the same pencil which he uses for his accurately drawn diagrams may in the hands of the artist produce the sketch of a masterpiece, there would be less discussion about the meaning of art-science. H. H. S.

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A POWERFUL LIGHT.—We quote from the journal of the French Photographic Society the following recipe for a pyrotechnic mixture, credited to the *Chemiker Zeitung*, which is said to make a light visible at a distance of one hundred kilometers in clear weather. The ingredients are as follows:

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|---|---|
| Magnesium powder . . . . . | 20 parts. |
| Nitrate of baryta . . . . . | 20 " |
| Flour of sulphur . . . . . | 4 " |
| Beef suet . . . . . | 7 " |

Mix the different materials in the melted suet, This amount, moulded in a box of zinc, one tenth of a metre in height and seven one-hundredths of a metre in diameter, will burn twenty seconds with a light equal to 20,000 candles. The weight of the whole is about a pound, and as the magnesium amounts to about one-third of the weight, it will be easy to calculate the cost of this powerful illuminant, which may be able to render service to photographers under certain circumstances.

## A PHOTOGRAPHIC CONTRAST.

THE particular aversion which President Harrison has to having his photograph taken, or his portrait drawn, has of late become the subject of much comment in the daily and weekly press. A number of efforts have been made to persuade him to sit for a picture amid the surroundings in which he is daily found in the White House, but they have proved of no avail. He sat for some pictures to the regular Washington photographers when he came here first; but lately he has refused to give any sittings to any one. In this idiosyncrasy he is naturally followed or imitated by his subordinates—particularly the Postmaster General, who has developed an equal aversion to being photographed, and has steadfastly refused to sit to the lacal photographers since his superior has set the example. This peculiarity of the present Republican Court was lately made the subject of a cartoon by *The Judge*, which represents the Cabinet officers on their way to the White House clad in the "Anti-photo Gown," a long bathing robe, with a cowl drawn over their faces, to the evident discomfiture and extreme disgust of the Kodak fiend who was waylaying the party. So much for the Land of Freedom. In Europe photography stands on a different basis—our art being encouraged and patronized by the ruling sovereigns. In Austria the Club of Amateur Photographers is under the direct patronage of her Serene Highness, the Grand Duchess Marie Therese, who takes a personal interest in the work of the members, and on February 1st of present year presented two of the members with a gold Maria-Theresa medal for their proficiency.

So great is the interest the Emperor and Empress of Germany take in practical photography, that on the tenth of last April Herr Ottomar Anschütz was invited to produce some of his studies of wild beasts, acrobats, manœuvering troops, running animals, and other living subjects, in connection with his improved Zoetrope or "Lebensrad," after which the photographic chemist, Dr. Adolf Hesekiel, was invited to show his platina paper and flash-lamp, and explain to the assembled company how photographs can be taken without daylight. Dr. Hesekiel first exhibited several platina prints in different stages of printing, which were greatly admired for their softness, then, by invitation of the Emperor, Count Pückler was first photographed by the Blitz-pulver, the flash startling the company. The Emperor then asked his Consort to give a sitting, but as the Empress declined, the Emperor himself posed. Their Majesties were highly pleased with the results, and expressed to Dr. Hesekiel the pleasure the demonstration had given to them.

J. F. S.

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REPRODUCTION OF NEGATIVES.—At a recent meeting of the French Photographic Society, M. E. Vallot showed a successful contretype in china ink, produced as follows: A glass plate had been coated with bichromated gelatine and exposed under the negative to be reproduced. It was then developed in water, holding in suspension a sufficient quantity of china ink, when the parts not acted on by light softened and absorbed the evolved liquid, while the parts hardened and rendered insoluble remain clear. Other insoluble coloring matter may be used as well as china ink, so long as it is stable under the action of light.—*The Beacon.*

## AN ENNOBLED PROFESSIONAL.

IT is with pleasure that we announce to our readers that Herr Fr. Voigtlander, head of the firm of Voigtlander und Sohn in Braunschweig (Germany), whose name is known to almost every photographer throughout the civilized world, has been the recipient of a fresh honor. It has not been so long since he was raised to the Order of Knighthood, and now the Emperor of Austria, in appreciation of his great services to the photographic world, has conferred upon him the Ritterkreuz of the Franz-Joseph-Order. We congratulate Herr Ritter von Voigtlander, and trust that he may bear his honors meekly, and that the glitter of the knightly star upon his manly breast will not prevent him from continuing in his efforts to give us a perfect photographic lens. Further, that the escutchion of the new Baron Euryscope von Voigtlander may never be fogged by the Bar-Sinister, and that the results of his labors may always prove absolutely rectilineal and free from distortion, with a flat field and sharp definition. ADOLPHE.

## PHOTOGRAPHERS AND CROWDS.

CROWDS, especially of street boys and street girls, have been the deadly enemies of architectural photographers for all time, and many have been the devices for clearing an open space in front of the camera. One of the most time-honored is that of mounting a large lens at the back of the camera to draw the crowd in that direction, while the view really desired is taken by the small lens in front.

A few days ago two English photographers planted their cameras on opposite sides a deserted space in Ghent to take an adjacent church; instantly, of course, children dropped from the clouds, emerged from the earth, concentrated from all possible directions, and each operator had his crowd around him. One of them folded his arms, leant against a wall, and gazed steadfastly at his friend in the distance. The children soon became tired of gazing at an operator doing nothing, then cleared off to watch the more active manipulator; the first one, thus relieved, made his exposure.

The same day, when taking another view, one of these photographers discovered that a boy in the crowd prided himself on his dancing; that boy was immediately offered the sum of one penny to dance several yards behind the camera. The delighted boy entered into the contract, and executed a kind of Belgian "fling" which drew the crowd to the back of the camera.

The view was then taken.

In the old cities of Belgium and Holland architectural photographic work is somewhat more easy than in towns in England, because there are so many canals and rivers about. For this reason numerous picturesque views are obtainable when the lens is pointed over the parapet of one or other of the bridges.—*The Photographic* (*London*) *News*.

## A NEW SOCIAL FANCY.

ONE of the latest fads of social swelldom is the "Trousseau Album," and although it has been mercilessly ridiculed in various quarters, we think the idea will increase in favor, and that it has come to stay. An album of this kind, even if not as extravagantly gotten up as the one here described, will without doubt always be an object of interest and curiosity, the more so as the years elapse. To a family in which it descends as an heirloom its value cannot be measured by money; while to the student of history and social philosophy a work of this kind—a century hence—would prove a perfect storehouse of information.

To properly arrange an album of this kind is not an easy task, as it requires not only good judgment on the part of the photographer, but of the modiste and binder as well, to which must be added a liberal outlay of money.

The specimen which came under the notice of the writer was a perfect specimen of its kind. Sufficient funds had fortunately been left the family, after securing the titled foreigner as a husband for their daughter, that they were free to indulge in this whim of the bride. The album was handsomely bound in Turkey morocco, and fastened with gilt clasps. On the corner was emblazoned a gorgeous crest and coat-of-arms in gold, silver, and bronze. The inside of the cover was lined with heavy watered silk, as was the fly-leaf, which protected the illuminated title pages. Then followed on opposite pages a portrait of the bride and her foreign consort. On the next left-hand page was a full length photograph of the bride in her wedding dress, veil, orange blossoms and all, just as she had stood before the altar. Opposite, on the right-hand page, a dress similar to the photograph was constructed in miniature of the identical fabrics, silks, satins and laces, as was the original; even the garniture of orange blossoms being painted on the model. This was protected by a deep hinged mat, made of the finest pebble board, with gilt beveled edge. The next picture represented the bride in her tailor-made travelling dress, which was worn on the wedding tour immediately after the ceremony. On the opposite page we again had a miniature model of the original fabric, showing the colors and materials, which could not be reproduced by the camera, and so on through the whole category. Evening dresses, street costumes, house robes, followed one after the other, through the whole list of troasseau, the pose of the bride being varied in each picture so as to show off the dress and its fair wearer to the best advantage, while on the opposite side was to be seen the exact model of the identical fabric, always, of course, protected by the deep mat. The whole album did credit to the different artists who were engaged on it.

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PHOTOGRAPHY AND METEOROLOGY.—At the meeting of the Royal Meteorological Society last week, in London, Mr. G. M. Wipple, B.Sc., F.R.A.S., read a paper on "A Brief Notice respecting Photography in Relation to Meteorological Work," in which he said the first person to use photography for obtaining meteorological records was Mr. J. B. Jordan, of Falmouth, 1838. Some years later, Sir F. Ronalds and Mr. C. Brooke devised more complete and elaborate apparatus, the arrangement of the former being now in use at the observatories of the Meteorological Office, and

that of the latter at the Royal Observatory, Greenwich. Reference was also made to Mr. J. B. Jordan's form of sunshine recorder.

Captain Abney's photo-nephograph was then ably described by Mr. Wipple, who prefixed his remarks with the statement that the apparatus had not yet been fully developed. He then went on to state that the object of the photo-nephograph was to obtain simultaneous instantaneous photographs of the same cloud from two or three stations situated at a distance of half a mile and upwards from each other. These simultaneous pictures are then utilized for determining the positions of clouds above the surface of the earth, and so obtaining a knowledge of the upper currents of the air, their direction and motion, at heights, far above those at which anemometers can be placed, and in places where they may be supposed to be unaffected by the irregularities and eddies formed by excresences, such as hills and valleys, which modify the contour of the earth's surface. At Kew, two cameras fitted to theodolites are erected on stands half a mile apart, but electrically connected with an underground telegraph wire. Each camera is provided with an adjustable instantaneous shutter, which can be manipulated by an electric current at the will of the directing operator. The *modus operandi* is as follows: A first points his camera at a selected cloud, and then having instructed the observer at the remote station B, through a telephone, as to the direction in which he should place his instrument, releases both shutters at the same instant of time, so obtaining a pair of pictures in which the stereoscopic effect affords the required data.

The various other photographic processes and apparatus which have been employed in connection with these instruments were fully described. Mr. W. Marriott, F.R.M.S., also gave a paper on "Application of Photography to Meteorological Phenomena," showing how photography could be most usefully employed for the advancement of of meteorological knowledge. Much valuable information had been recently obtained from photographs of lightning and clouds. An interesting collection of such photographs was shown on the screen, together with others illustrating floods, whirlwinds, tornadoes, hailstorms, frost, snow, etc. After the reading of these papers, the meeting was adjourned to allow the Fellows to inspect an exhibition of instruments, etc., illustrating the application of photography to meteorology.—*Photography*.

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STELLAR PHOTOGRAPHY.—The *British Journal of Photography* states in an article on above subject that in photographs of the stars the coincidence of the size of the star discs on the negative with their reported magnitudes is by no means a simple matter to explain; indeed, at one of the meetings of the Royal Astronomical Society, a speaker of note said it must be looked upon as a wise dispensation of Providence! But, from a paper read at that Society's meeting in March, it would seem that the reported magnitudes are by no means of the exact nature that might be expected from the mode in which they are repeatedly referred to. In an interesting and valuable paper by Dr. E. J. Spitta, respecting the Wedge-photometer, he described how he had devised a method for producing discs of light of one, two, three, up to eight units of intensity, and when he valued them with the Wedge-photometer and Abney's photometer respectively, there was a variation of fifty per cent. The result of these experiments indicated, said Captain Abney, that all Professor Pritchard's measures of the magnitude of stars would require to be altered.

That in our own country this special line of study is not neglected, may be seen by the fourth annual report of "The Photographic Study of Stellar Spectra, conducted at the Harvard College Observatory," under the direction of Prof. Edward E. Pickering, as a memorial of the late Dr. Henry Draper. The first investigation undertaken was the formation of a catalogue of about 10,000 stars north of —25°, and in general brighter than the seventh magnitude. This is nearly completed. The second investigation relates to the spectra of the fainter stars and photographs with exposures of an hour have been made of nearly all parts of the sky north of —25°, several thousands of these spectra having already been measured and identified. About a year ago an expedition was sent to Peru to undertake the examination of the southern stars, and very considerable progress has been made. Photographic charts of the entire sky south of —25° were first obtained, using the Bache telescope, with exposures of ten minutes, and showing all stars brighter than the tenth magnitude. A second set of charts having exposures of an hour, showing stars brighter than the fifteenth, and two similar series of photographs of spectra, are taken with exposures of ten minutes and one hour, so that at least eight photographs will thus be obtained of all the brighter stars. The total number of photographs so far obtained is 7883, and the report concludes with the statement that the progress thus far made in the work could not have been accomplished without increased aid on the part of Mrs. Draper.

COPYING TRACINGS, BLACK LINES ON WHITE GROUND.—Cola's process, which gives a black line on a white ground, is now greatly in use for copying tracings. It prints quickly, and is very simple to work. The exposure ranges trom five to ten minutes in the sunlight, and from twenty to forty minutes in the shade. I find the best results are got on a bright day and printing in the strongest light. I have very often to reduce large drawings made on yellow tracing paper to a small scale to transfer to a stone for lithographic purposes, and use this process to get a more suitable copy to photograph from. To make a print, you put the tracing face downwards in the printing and place the sensitive paper on the top of it, then a piece of thick felt, and then the backs, and put a good pressure on by means of screws, which are much better than springs, as you are able to get a more even pressure. To ascertain if sufficiently printed, lift up one corner, and if the greenish yellow tint has disappeared, except where covered by the lines, it should be taken out and immersed, face upward, in a bath composed of gallic acid 20 parts, alcohol (methylated) 200 parts, and water 1,000 parts, and remain for three minutes, at end of which time the lines will be up strong and black. It should then be thoroughly washed in running water for a quarter of an hour, and surface rubbed with a soft sponge, then taken out and hung up to dry. The following will be found a good formula for sensitizing the paper:

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|---|---|
| Water | 300 parts |
| Gelatine | 10 " |
| Perchloride of iron | 20 " |
| Tartaric acid | 10 " |
| Persulphate of zinc | 10 " |

Apply this by means of either a broad, flat camel-hair brush or a fine sponge to a hard, well-sized paper, then hang up to dry in a dark room. To over-expose a print means losing the lines, and under-exposure gives a very dirty, neutral tint ground and very faint lines.—*Scientific American.*

## THE PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.

A STATED Meeting of the Society was held Wednesday evening, June 4th, 1890, the President, Mr. John G. Bullock, in the chair.

The Secretary reported the receipt of a copy of the *Photographic Times* Annual for 1890, presented by the publishers; also a number of books on photographic subjects from Mr. F. H. Rosengarten, for which votes of thanks were passed.

The Executive Committee reported that on the evening of May 21st, by invitation of the Committee, a lecture had been delivered before the Society by Prof. Wallace Gould Linsin, of Brooklyn, N. Y., on the Photography of Self-Luminous Subjects. The lecture treated principally of photographing pyrotechnic displays, and was illustrated by a number of interesting lantern slides.

The Committee on Lantern Slides announced that the Interchange Lantern Slides from the Louisville Camera Club would be shown after the meeting.

Mr. John Carbutt, Jr., who had been one of the photographers attached to the U. S. Scientific Expedition to West Africa for the purpose of observing the total eclipse of the sun in December last, gave an interesting account of the trip, with extracts from the bulletin published on board the U. S. S. Pensacola, by authority of Professor Todd, director of the exhibition.

Mr. John Carbutt illustrated by the aid of the optical lantern the development of a dry plate. The development and fixation were performed in a glass tank of a dark orange color, placed in a lantern, the operations being plainly shown on the screen.

Adjourned.

ROBERT S. REDFIELD, *Secretary.*

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POSING FOR A PHOTOGRAPH.—Don't wear a silk frock. Nothing comes out so badly as the gloss of satin or glimpses of silk. Instead choose wool or velvet. If you are young, wear a white gown. Remember that gray takes white, and yellow or tan becomes black, so that with your white gown you must have white gloves. Lace always comes out very well, and furs are artistic. Do not fix your hair in any elaborate way, and remember you are posing as a lady and not as an actress. If you have any freckles the artist will, if he is a good one, spot them out, and if your hair is really light, put a little powder on it with powder-muff, and it will take its natural color.

Unless you are one of the people who can smile naturally to order, do not attempt to look pleasant, for the result is too often that seen in the picture of somebody just sitting down in the dentist's chair. For a full-length picture, throw your body, from the waist up, a little bit forward. Remember that a bonnet in fashion to-day will be out of style a year from now, and that, unless your pictures are only for the time, it is better to have them taken without a chapeau, says the Albany *Journal.* If you want to see a picture that could nowhere be mistaken but for that of a lady, look at those of the Duchess of Fife—not pretty, but refined looking. She inherited much of her mother's good sense, so that she has a photograph taken in a simple woolen gown, standing beside her hnsband, not in a dramatic fashion, but just as a lady might and does stand.

## OUR ILLUSTRATION.

OUR illustration is taken on the shores of the river Delaware, a few miles below Philadelphia. The fishermen run out a net about three miles long, one end of which is drawn in by a windlass with horse-power, the other by ten or a dozen men. At the start the two ends are a half mile apart. While the net is being drawn in, the men walk slowly along toward the other end. It usually takes them three to four hours to land the net. The haul of shad varies from a very few up to fifteen hundred, all depending on the height of the season and the run of the fish. Three hauls are made during twenty-four hours. The fishing grounds are so valuable that the owners frequently receive as much as one thousand dollars for the use of the grounds for a season.

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PHOTOGRAPHISCHER ZEITVERTREIB, MIT HILFE DER CAMERA. By Herman Schnauss (Dusseldorf: E. Liesegang Verlag). Translated into English, "Photographic Pastime, by Aid of the Camera." This work, although in the German language, is so fully illustrated as to be intelligible to readers who know but little of the language in which it is published. It is divided into five parts, under the headings: Specialties, Curiosities, Photography with Ordinary Expedients, Photo-Optical Entertainments, and Specimens of Photographic Printing. This peculiarly interesting book deals mainly with the various photographic freaks or curiosities which have been mentioned in the various photographic publications during the past two years, while a portion of the work is devoted to solid instruction, on flash light, animal studies, flower work, etc., the major part of the work describes the methods by which photography may be used as a pastime, such as making doublets, caricatures, ghosts, magic luminous, composite, and spirit photographs, and a host of kindred subjects, to produce abnormal effects and to entertain a company.

The compiler of this work has succeeded in bringing together a great deal of matter not usually found in a photographic manual. The work will prove especially interesting, and a useful companion to our lady amateurs.

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PRINTING FROM NEGATIVES OF STRONG CONTRAST.—One way I have used, and it is very successful, is to gum a piece of tissue paper over the back of the negative at the edges. Over the dense portions the paper is cut away, and over the clear parts it is worked on with a lead-pencil. In very extreme cases I paint on the tissue paper with some transparent non-actinic color, such as burnt sienna, instead of the lead-pencil. Another way, also very good, is by means of local reduction. This must be done before the negative is varnished, or else the film of varnish must be removed with methylated spirit. Any good reducer will do, but I have been most successfu with two, and it must be applied with a small camel's-hair pencil. The first is ferric chloride. A solution of this containing 15 grains to the ounce of water is painted over the dense parts with the brush; the negative is then swilled and placed in the hypo bath. If the reduction is not sufficient, the operations are repeated till it is. The second is a mechanical reducer. A piece of soft chamois leather or rag is stretched over the tip of the finger; it is then moistened with methylated spirit, and the film gently rubbed over the dense parts with it. The outer surface of the gelatine is rubbed away, carrying the silver with it.—*Ag. Br., in Photography.*

WHY THE SUBJECT OF A PHOTOGRAPH COULDN'T LOOK PLEASANT.—"A man trips over his own cleverness now and then," said Max Platz in the Chicago *Mail*. "You know that when people are sitting for pictures they are given an object to keep their eyes fixed on, don't you; that this object is usually a photograph fixed in a clasp at the top of a stick, which may be raised or lowered to suit the case. Usually there are two photographs back to back—one the picture of a gentleman and the other the likeness of a lady; if the sitter is a gentleman he is given the charmante dame. to rest his eyes on; if a lady the gentleman's photograph is turned to meet her gaze. The other day a charming young society lady was sitting for a picture; I had her all posed and told her to look at the object indicated and look pleasant. She complied by looking savage enough to fight a dog. I didn't say anything. It's no use, you know. Besides, the plate was spoiled; so I slipped in another and gave her a slightly different attitude and ventured a bit of time-tried and fire-tested wit in order to make her look sweet as I called her attention to the object picture and pulled the string. Same as before—a scowl that nearly broke the plate. Once more, and a funny story thrown in. No good. Still another, with a neat bit of flattery at the critical moment. Worse and worse! Four plates spoiled. Finally I said:

"'Had a death in the family?'

"'No,' she said.

"'Lost a pet dog?'

"'No.'

"'Had a quarrel with any body?'

"'No.'

"'Well, then, please look pleasant,' and I drew her gaze to the aforesaid picture.

"'Must I look at that?' she asked.

"I told her she must.

"'And look pleasant?' she inquired.

"'Yes,' I said.

"'I can't,' she remarked, quietly but firmly.

"I looked at the photograph to which I had been directing her gaze. It was a picture of myself, The joke was on me."—*The Photographic Times.*

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THE HARVARD DRY-PLATE COMPANY have recently put upon the market a Dry Developer, which is meeting with great favor, as would be expected of anything sent out by this well-known company.

This developer is something which photographers have long desired. It is put up in powders, easily carried, and takes up but little room. Another great advantage which it possesses over liquid developers is that there is no danger of breakage and consequent damage to plates and other material.

The developer requires only the addition of water for use. It is put up in packages convenient for the traveling public.